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AIR UNIVERSITY

A COMPARISON OF AIR FORCE FIELD GRADE AND
COMPANY GRADE OFFICER LEADERSHIP

by

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Abstract

Although leadership development is important, the Air Force does not appear to have a comprehensive, empirical model for leadership development. For several years the US Army has had a service-specific leadership model (DAP 600-80), derived from empirical studies on hierarchical leadership (Harris, 1994), indicating that empirical development of a similar model for the USAF should be feasible. The purpose of this study was to determine differences in importance of leadership behaviors between AF company grade officers (CGOs), majors (O-4s), and lieutenant colonels (O-5s), thereby contributing to the establishment of an empirical leadership development model for USAF officers. The Managerial Practices Survey (Yukl, 1990) was administered to over 1000 officers at the USAF Air University. Analysis indicated the survey's eleven leadership behaviors are relevant to all officers, but become even more important as officers rise in rank. It also supported that the USAF can be divided into "domains"—levels containing several ranks having only minor differences in leadership requirements—and that CGOs, O-4s, and O-5s are in the same domain. In addition, domains appeared to be further divided into "strata": sub-levels containing ranks with the same leadership requirements. O-4s and O-5s seemed to belong to the same strata and CGOs to another. Based on these findings, recommendations were made to ensure the leadership curricula at the USAF officer Professional Military Education schools are formed around this core of leadership

behaviors, with increasing emphasis on the behaviors that become more important to officers as they rise through the ranks.

Chapter 1

Introduction

I have also found that the main difference between units that perform at their maximum potential and those that fail is usually their leadership . . . a single individual in a position of leadership can make the difference between a unit's success or failure.

—General Ronald R. Fogleman

Individual leadership effectiveness seems to be the critical component to mission success or failure. If this is true, the Air Force may need a service-specific leadership model to guide in officer development. This model should be comprehensive enough to specify which leadership skills and behaviors are critical to specific officer ranks throughout the Air Force hierarchy. Research as early as the 1970's indicates that effective leadership behaviors vary according to the leader's position in the organizational hierarchy (Jaques, 1989).¹ This research has been extended by the US Army in building hierarchical leadership models describing leadership skill requirements for second lieutenants to four-star generals (Harris, 1994).² However, the Air Force does not appear to have investigated hierarchical differences within its own officer corps. The purpose of this research is to develop a hierarchical model of effective leadership behaviors for Air Force officers across two organizational levels.

Leadership hierarchy theory proposes that effective leadership behaviors are not uniformly distributed at every level in the organization. In other words, the behaviors

that make someone a successful leader while in one position may not be as critical to his or her success when moved to another level in the organization. For example, the Army determined that technical skills become less important as officers rise through the ranks, while conceptual skills become more important (Harris, 1994).³ In general, this changing importance of leadership skills is attributed to the different leadership environments at each level in the organization. Environmental differences generally include the nature of work, the number of people supervised, or the number of lateral relationships. Although the Army has recognized this and built specific models for various leadership positions, the Air Force lags in any published modeling.

Although much empirical research on AF leadership requirements has been done in the last few years, each of these studies has focused on requirements of a particular rank, career field, or unit. In addition, these studies used different definitions and measures of leadership, preventing the integration of the results into a larger AF leadership model. The purpose of this research is to partially bridge this gap by developing a hierarchical leadership behaviors model that includes company and field grade Air Force officers.

Notes

¹ Jaques, Elliott. *Requisite Organization*. USA: (Cason Hall, 1989), 11.

² Harris, P., and K.W. Lucas. *Executive Leadership: Requisite Skills and Developmental Processes for Three- and four-Star Assignments*. Research report. (Alexandria, VA: Army Research Institute, 1994), 8.

³ Ibid., 14.

Chapter 2

Literature Review

This review establishes a formal definition of “leadership hierarchy” and presents research of hierarchical leadership across civilian and military organizations. The review ends with a summary of Army and Air Force leadership studies, demonstrating that hierarchical modeling for Air Force leadership requirements is reasonable, yet appears to have never been empirically attempted across all hierarchical levels.

Defining Leadership Hierarchies

“Leadership hierarchies” are graphic models that describe the leadership requirements for each level of an organization. To build such a model for an organization requires two variables: (1) leadership requirements applicable to the organization and (2) their significance at each level in the organization. “Leadership requirements” are the horizontal dimension of the model and represent the personal attributes an individual needs to be an effective leader at a certain level. For instance, Col Tim Timmons writes of squadron commanders, “Good communication is the key to effective squadron leadership...”.¹ If this is true, effective communication is a leadership requirement for the squadron commander level. Leadership requirements are generally expressed as skills, traits, or behaviors. A series of these requirements comprise a “taxonomy” of leadership requirements. A taxonomy may include diverse requirements such as

technical, communication, and planning skills. However, the taxonomy's leadership requirements may be grouped into categories, each containing many specific, related leadership requirements. For instance, communication skill may be a category including public speaking, conversation, and writing skills. In review, the horizontal dimension of a hierarchical model is an organization's leadership requirements. These are usually grouped into categories of leadership requirements, each containing multiple sub-requirements. This set of leadership requirement categories is referred to as a taxonomy.

To complete the construction of the model requires determining its "vertical leadership dimension": the significance of each leadership requirement at each level of the organization. For instance, Company X may determine that skills in the planning category are of little importance to the effectiveness of their line supervisors but are critical to their top executives (Table 1). Furthermore, they may discover that communication skills, relative to the other categories, are moderately important to the leadership effectiveness of all their employees.

Table 1. Notional Leadership Hierarchy of Company X

Vertical Dimension	Level in Organization	Relative Importance of Skill Categories		
		Technical Expertise	Communication	Planning
	Executive	10%	20%	70%
	Manager	20%	30%	50%
	Foreman	50%	30%	20%
	Line Supervisor	75%	20%	5%

← Horizontal Dimension (Leadership Requirements) →

Hierarchical leadership models are valuable tools for personnel selection, promotion, and training. For example, promotion criteria to a certain level can be based on leadership requirements proven to be significant for that level. Because the Air Force is organized into layers based on rank, empirically constructing a similar model by

determining which leadership requirements are applicable to the Air Force and how their significance is different for each rank should be possible. This study takes the first steps in building such a model by comparing the leadership requirements for the company and field grade levels of the Air Force hierarchy.

Hierarchical Leadership in Civilian Organizations

Three-level hierarchical models are widespread in the literature and have characteristics found in all types of organizations. Specifically, they demonstrate that organizations tend to form the same three levels of management behaviors and to divide laterally based on technical specialization. Three-level models are the basis of Stratified Systems Theory (Jacques, 1989) and Katz' Hierarchy (Katz, 1955). These two studies further evolved the two dimensions of the three-level model and provided the foundational study of leadership hierarchies in the military.

Three-Level Models

Models of this type characterize organizations vertically and horizontally (Mintzberg, 1977). Vertically, organizations are stratified into three levels, and horizontally they are divided into functional departments (Figure 1). The three vertical levels are the worker, manager, and executive levels. Workers are at the bottom and perform the primary work of the organization. They apply specialized skills on tasks that are short-term and well defined. The mid-level managers supervise the workers directly through face-to-face interaction. They usually need to coordinate with each other on behalf of their departments. At the top level are the few executives who deal with workers indirectly through the managers. Their level is strategic, dealing with the entire

organization on long-term issues. They also manage the relationships with external organizations. Organizing horizontally into functional departments results in workers with similar skills being grouped together. Similar skill grouping can transcend the levels, especially at the manager level, where managers usually supervise workers within their own technical specialty.²

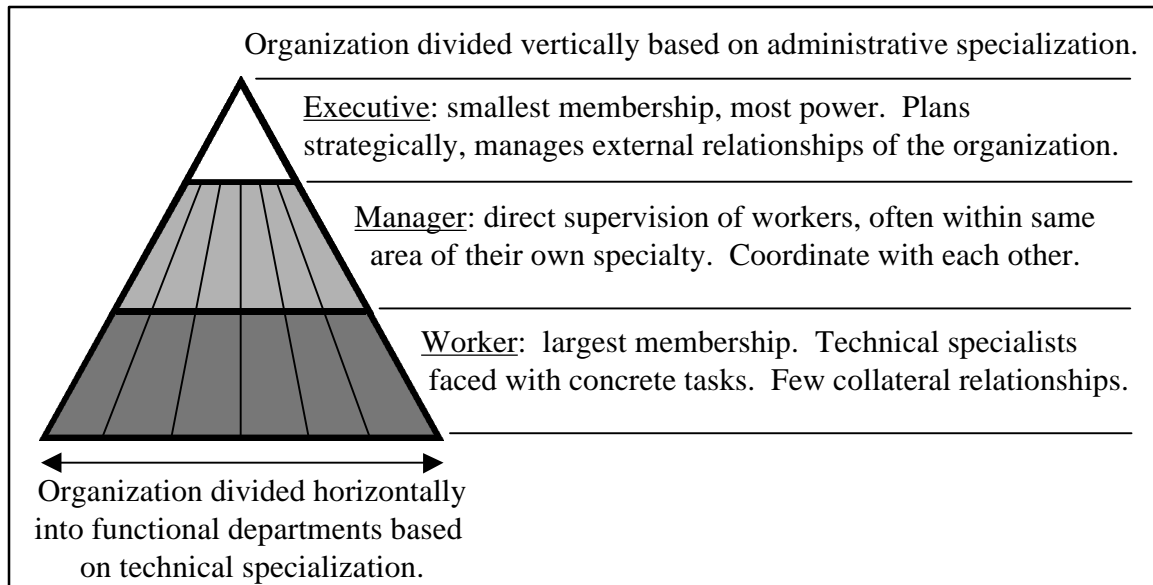


Figure 1. Three-Level Models

The horizontal and vertical dimensions of an organization occur as a result of either technical or administrative specialization. Technical specialization results in the horizontal division of the organization into functional departments. Administrative specialization results in vertical stratification into levels. Administrative specialization skills typically include planning and coordinating long-term projects requiring several types of workers.³ Mintzberg concludes that formalization of an organization into hierarchies is merely a formalization of the behaviors people exhibit in their jobs.⁴

Three-level hierarchical models illustrate two central concepts of organizational structure. First, organizations tend to stratify in the horizontal and vertical dimensions,

and vertical stratification usually results in three major levels, regardless of organizational size. Second, boundaries between vertical levels are based on inherently different leadership requirements of work performed throughout the same organization. The three-level model may be applied to many facets of the Air Force leadership. For example, the Air Force seems to recognize three levels within its officer corps: company grade officer (CGOs), field grade officers (FGOs), and senior officers. Stratified Systems Theory (SST) takes three-level models to another level by further developing the vertical dimension of organizations.

Stratified Systems Theory (SST)

SST describes a complete hierarchical leadership model (Jaques, 1976). Vertically, the model divides organizations into levels based on task complexity while the horizontal component consists of one leadership requirement: the ability to deal with complexity (Figure 2). SST refers to organizational levels as “strata” and states that tasks performed in higher strata are more complex than are those at lower strata. Because measuring task complexity directly is difficult, Jaques used the length of time required to complete tasks as an indicator of task complexity and called this period the “time-span of work.”⁵ In over 100 studies, Jaques found the most effective bureaucracies organize in the vertical dimension according to a particular pattern based on time-span of work. These organizations defined their lowest level to comprise workers whose time-span of work was three months or less. Their second level consisted of workers whose time-spans of work were three months to one year. This pattern continued with time-span milestones of two, five, ten, and twenty years. As this theory developed over several years, enough

similarity was found in adjacent levels to regroup the seven strata into three larger groups called “domains”, thus repeating the structure of three-level models (Jacques, 1989).⁶

TIME-SPAN OF WORK	STRATA	DOMAINS	TASK COMPLEXITY
50+ YRS	*VIII	CORPORATE STRATEGIC	Most complex ↑
20 -50 YRS	VII		
10 -20 YRS	VI		
5 – 10 YRS	V	GENERAL	
2 - 5 YRS	IV		
1 – 2 YRS	III	OPERATIONAL/ DIRECT	↓ Least complex
3 MOs – 1 YR	II		
1 DAY – 3 MOs	I		

*An eighth stratum may exist in larger organizations.

Source: Jaques, Elliott. *Requisite Organization*. USA: Cason Hall, 1989.

Figure 2. Stratified Systems Theory

The horizontal dimension consists of a single leadership requirement: the ability to deal with complexity. SST states that human ability to deal with complex problems does not improve in small graduations but in large, discrete increments called “modes.” These modes correspond to the strata of Figure 2. For example, an individual with a mode V ability to deal with complexity is able to perform tasks associated with strata V: those with a time-span of five years or less. He is also able to perform tasks of lower strata, but not of higher ones. If his ability to deal with complexity improves, it will not be by a small increment, but by a jump into the next highest mode, mode VI.⁷

SST contributes significantly to the study of leadership hierarchies because of its empirical characterization of both leadership dimensions: the vertical based on time-span of work and the horizontal based on the ability to deal with complexity. It is therefore a more sophisticated and empirical version of the three-level model. Its use in the leadership modeling of the US Army officer corps may indicate it is also relevant to the study of Air Force CGO and FGO leadership (Harris, 1994).⁸

The Katz Hierarchy

Katz proposed a hierarchy of three categories of leadership skills and an unspecified number of levels (Katz, 1955). Although the contribution of this model to the vertical dimension is limited, its leadership categories further evolve the three-level model and SST in the horizontal dimension. The three categories of skills were technical, human, and conceptual.⁹ Technical skill is the ability to perform concrete, well-defined tasks of limited scope. Human-relations skill is used to interact effectively with others or to cause others to be more effective through supportive actions like motivating or encouraging. Administrative skill enables a worker to deal with problems involving the entire work environment: people, resources, policies, and organizational structure. This type of work is more conceptual.¹⁰ Mann validated these categories several years later (Mann, 1965).¹¹

Katz further theorized that as one rises in the organization, the need for technical skills diminishes, the need for conceptual skill increases, but human-relation skill is equally important at any level.¹² However, Katz did not specify at what level these changes would occur, or to what extent. One of the studies that validated the categories also validated that their relative importance varied in the manner proposed by Katz but included the first two levels of supervision only.¹³ Although a more complete characterization could have been performed, this model was a significant step in the evolution of the horizontal dimension beyond three-level models and SST. Katz' work, integrated with SST, was the basis for the Army's hierarchical leadership model.

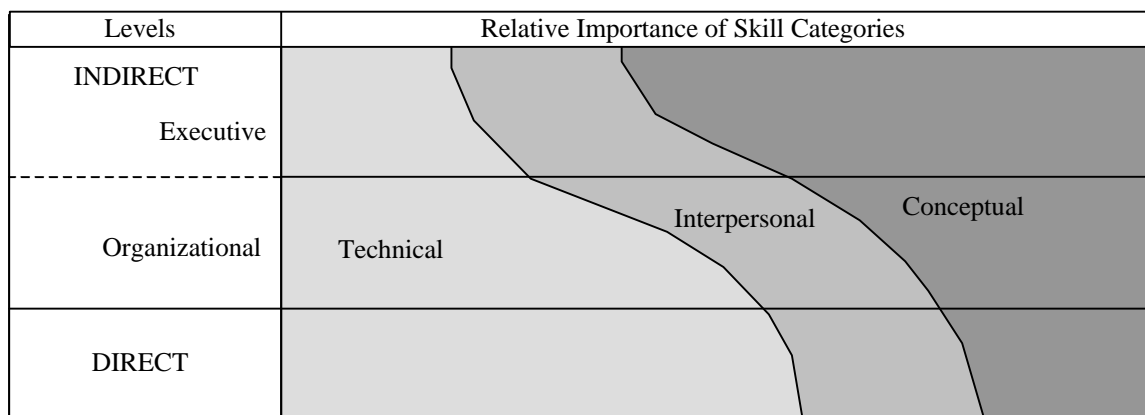
Summary

Three-level models demonstrate that vertical stratification into the same three levels of management is pervasive amongst civilian organizations. They also demonstrate that

horizontal stratification based on specialized skills is a common occurrence. SST and Katz provide specific models that further refine, articulate, and empiricize the vertical and horizontal dimensions of the hierarchical model. They also bridge these concepts from their civilian origins to the US Army.

Hierarchical Leadership in the US Army

The US Army officially adopted a hierarchical leadership model of its officer corps in 1985 (Figure 3).¹⁴ This model adopts the vertical dimension from SST and the horizontal dimension from Katz Hierarchy (Jaques, 1985).¹⁵ Like SST, the model divides the officer corps into three levels. The lower level, Direct, is so named because these officers interact directly with the workers of the organization, the enlisted corps. The Executive and Organizational levels are “Indirect” because from these levels officers direct troops by delegating to leaders in lower levels. The levels were not determined empirically, but by approximating which ranks correspond to each SST strata based on task complexity (Harris, 1994).¹⁶ See Appendix A for the rank-strata correspondence.



Source: DA Pamphlet 600-80. Executive Leadership (1986),14.

Figure 3. US Army Leadership Model

Note also in Appendix A that the CGO (O-1 to O-3) and the FGO (O-4 to O-5) strata are in the same major domain. Therefore, although some differences may exist between the leadership requirements of these groups, they may not be significant. In fact, it is possible that O-3s, the senior members of stratum II, may differ little from O-4s, the junior members on the next stratum.

In contrast to SST, the taxonomy used in the Army model is from Katz' three skill categories but are renamed as technical, interpersonal, and conceptual (Harris, 1994).¹⁷ Consistent with Katz' theory, the Army model proposes that at higher ranks the importance of technical skill decreases, the need for conceptual skill increases, and the importance of interpersonal skill remains constant. However, this adaptation from Katz was made without supporting empirical studies within the Army.

The Army's model was adapted from two classic hierarchical models. As such, it provides a comprehensive, two-dimensional description of leadership in the US Army and provides a notional starting point for further study. However, the Army needs to empirically verify that the relative importance of Katz' categories changes within their officer corps as illustrated in Figure 3. Having done that, they would then need to quantify the relative importance of each category for every level. The Army model would then gain more credible, empirical support. This study attempts to start the construction of a similar model for the Air Force by empirically determining leadership requirements for the CGO and FGO levels of the Air Force.

Partial Studies

Significant, recent empirical contributions to research on leadership in military organizations have been made, but are "partial studies" because they address elements of

leadership hierarchies without entirely characterizing both dimensions. Such studies include the Strategic Leader Development Inventory (SLDI), which focuses on senior officer leadership requirements; the Four-Factor Model, which addresses the performance requirements of AF junior officers; and several studies that focused on particular ranks and career fields or units using the Managerial Practices Survey, the survey instrument chosen for this study.

Strategic Leader Development Inventory

The SLDI was designed to help senior US Army officers determine their personal strengths and weaknesses associated with their roles as general officers (Jacobs, 1997).¹⁸ It is included in this review as a successful example of an empirical taxonomy developed for the executive level. The current form of the SLDI groups leadership requirements into three categories: Conceptual Skills and Abilities, Positive Attributes, and Negative Attributes (Appendix B). The initial data contributing to its development were 100 structured interviews of lieutenant generals and generals to determine the key requirements of their positions.¹⁹ The SLDI was then refined over the next four years with data from 1200 US Army War College and Industrial College of the Armed Forces (ICAF) students who assessed the observed leadership behaviors of colonels and general officers.²⁰ An interesting implication of basing observations over this range of ranks is that the range includes two SST levels which should have distinct leadership requirements, yet the study results in a single set of leadership factors: SLDI. Although SST is part of the theoretical basis for SLDI, no rationale is provided for this discrepancy.

SLDI can not be considered a hierarchy because its applicability has been determined for general officers only. However, it supports the validity of this study

because it establishes the existence of a valid, empirical leadership taxonomy specific to modern senior military officers.

The Four-Factor Model for Junior Officers

A leadership taxonomy for junior officers is currently in development at the Air Force Institute of Technology (Hurry, 1995).²¹ In this model, the four categories that comprise the taxonomy are referred to as “factors”: leadership, task performance, interpersonal facilitation, and job dedication.²² Leadership is defined to be “the unique ability to influence subordinates’ behavior in ways that benefit the organization.” Task performance is the “proficiency or skill with which an individual carries out the technical or specialized activities in his or her job.” Interpersonal facilitation is the extent to which individuals help others to contribute to the accomplishment of their organization’s goals. Finally, the officer demonstrates job dedication by a willingness to be an effective performer.²³ The behaviors associated with these factors are in Appendix C.

The study validated this taxonomy as relevant to AF junior officers. Furthermore, it did what few studies of leadership taxonomies have done: it quantified the relative importance of each factor to performance effectiveness. Leadership (40%) was the most important, followed by task performance (28%). Interpersonal facilitation (15%) and job dedication (16%) were the least important.²⁴

The four-factor model is the most thorough, empirical research on AF leadership requirements in recent years. It validates that relevant leadership taxonomies exist for junior officers and that the taxonomy’s categories are of different and quantifiable importance to personal effectiveness. However, because the four factors were derived specifically for junior officers, these results apply to only one level of the AF leadership

hierarchy. This study, using a single taxonomy, also attempts to quantify the importance of leadership requirements, but for AF CGOs and FGOs, resulting in the construction of a significant portion of a hierarchical leadership model for AF officers.

Air Force Applications of the Managerial Practices Survey

These studies are presented because they are applications of hierarchical research to AF officers and demonstrate the use of the Managerial Practices Survey (MPS), which is the survey instrument used for this study. The MPS is built around Yukl's taxonomy, which is widely applicable because it integrates several approaches to taxonomy development.²⁵ The MPS was also validated for content validity, relevance, internal consistency, stability, inter-rater reliability, discrimination of contrasted groups, and criterion-related validity. The validation was conducted over several years through multiple studies, including one using Air Force subjects.²⁶ The taxonomy appears in Appendix D and the MPS is in Appendix E.

Yukl's taxonomy consists of eleven behaviors.²⁷ Because the MPS has been used in several Air Force studies, comparing them to the Army's Katz-based skill categories is worthwhile. First, it seems the MPS behaviors of problem solving and planning would fall into Katz' technical skill category. Furthermore, motivating, networking, supporting, and managing conflict might fit into the interpersonal skills category. Finally, clarifying, informing, consulting/delegating, recognizing/rewarding, and monitoring could belong to the conceptual skills category. However, these comparisons should be made cautiously for two reasons. First, taxonomies differ in purpose, level of generality, and methodology, making direct comparisons difficult (Yukl, 1990).²⁸ Second, Yukl's is a

behavior-based taxonomy while Katz is skill-based and, while leadership behaviors and skills are closely related, are not quite the same (Hughes, 1993).²⁹

The MPS was used in two studies of Air Force CGOs. The first studied 730 Air Force aircraft maintenance CGOs in the continental United States (Morabito, 1985) and determined a trend in differences between leadership behaviors required of these CGOs and majors in the same career field.³⁰ A modified form of the MPS was again applied to CGOs at the Squadron Officer School (SOS) (Jennings, 1991). One modification was increasing the response scales to increase the dispersion of results because Jennings judged that the original artificially encouraged a strong central tendency. Another modification was that students assessed their behaviors based only on performance at SOS, not on their primary jobs, and these self-assessments were not supported by assessments from subordinates. Jennings determined that SOS students' self-perception of their leadership effectiveness was higher at the end of the course than at the start.³¹

The MPS was also applied to a US Air Force Academy flying training squadron (Taylor, 1997). Taylor defined three leadership levels for his study. The squadron commander, operations officer, and assistant operations officers occupied the "executive" level. The flight commanders, who supervise the line instructor pilots, occupied the middle level. The instructor pilots comprised the lowest level. Taylor hypothesized that the importance of the MPS categories to the leadership effectiveness of squadron members would vary according to the three levels.³² Although Taylor noted certain trends, no significant difference was found.³³ Two causes for the inconclusive results may have been the small sample size, particularly at the executive level, and the manner in which Taylor defined the levels. For example, the squadron "executive" level

consisted of a lieutenant colonel, majors, and a captain.³⁴ However, in the literature, “executive” level usually refers to generals, CEOs, and presidents of large organizations.

While these AF studies accomplished their research objectives and, with the MPS, used a universal taxonomy, they focused on single career fields, ranks, or units. As with previously discussed studies, they do not comprise a complete Air Force hierarchy. In contrast, this study uses the same taxonomy to look at AF officers of several ranks and all career fields.

Summary

Three-level models demonstrate that most organizations tend to stratify vertically into three layers because they inherently require three levels of leadership “specialization.” SST is a detailed example of this vertical stratification. Three-level models also show the tendency of organizations to divide horizontally into departments based on the organization’s need for different skills. Katz Hierarchy is an example of the horizontal foundation for a leadership hierarchy that creates a taxonomy of leadership requirements. These theories are integrated as the vertical and horizontal dimensions of the Army’s top-to-bottom, hierarchical leadership model. Since the development of the Army model, other studies have validated taxonomies of leadership requirements for certain ranks: SLDI for senior officers and the Four-Factor Model for junior officers. Furthermore, Jennings focused a study on captains, while Morabito characterized a particular career field. Finally, Taylor analyzed leadership requirements by level, but for a small unit. These studies demonstrate that the concepts of a horizontal and vertical leadership dimension are valid and applicable to military organizations. Missing is a

study integrating both concepts into a complete leadership hierarchy for the USAF. This study partially fills this gap by examining leadership requirements for CGOs and FGOs.

Assumptions

The following hypotheses assume that CGOs, O-4s, and O-5s are all in the Direct Domain, as SST asserts. Because the hypotheses have been formed and tested based on groupings by rank, there is an inherent assumption of generalizability about the leadership requirements of all officers of a particular rank.

Hypotheses

- H1: The importance ratings reported by AF CGOs and majors are equal for the eleven Yukl behaviors: informing, consulting, planning, problem solving, clarifying, monitoring, motivating, recognizing/rewarding, supporting, managing conflict, networking.
- H2: The importance ratings reported by AF CGOs and lieutenant colonels are equal for the eleven behaviors.
- H3: The importance ratings reported by AF majors and lieutenant colonels are equal for the eleven Yukl behaviors.

Notes

¹ Timmons, T.T. *Commanding and Air Force Squadron* (Maxwell AFB, AL: Air University Press, 1993), 99.

² Simon, H.A. *The New Science of Management Decision* (Englewood Cliffs, NJ: Prentice Hall, 1977), 110.

³ Mintzberg, Henry. *The Structuring of Organizations* (Englewood, NJ: Prentice Hall, 1979), 71.

⁴ Ibid., 82.

⁵ Jaques, Elliot. *A General Theory of Bureaucracy*. (New York: Halsted Press, 1976), 106-107.

⁶ Jaques, Elliott. *Requisite Organization* (USA: Cason Hall, 1989), 10.

⁷ Jaques, Elliot. *A General Theory of Bureaucracy*. (New York: Halsted Press, 1976), 139-152.

Notes

⁸ Harris, P., and K.W. Lucas. Executive Leadership: Requisite Skills and Developmental Processes for Three- and Four-Star Assignments. Research report. (Alexandria, VA: Army Research Institute, 1994.), 7.

⁹ Katz, R.L. "Skills of an Effective Administrator," *Harvard Business Review*, Jan-Feb 1955: 34-36.

¹⁰ Mann, F.C. "Toward an Understanding of the Leadership Role in Formal Organization." In *Leadership and Productivity*. Edited by R. Dubin et al. (San Francisco: Chandler, 1965), 73-75.

¹¹ Mann, "Toward an Understanding," 82-86.

¹² Katz, "Skills of an Effective Administrator," 36-38.

¹³ Ibid., 86-90.

¹⁴ DA Pamphlet 600-80, *Executive Leadership*, 1986, 14.

¹⁵ Jaques, E., S. Clement, C. Rigby, and T.O. Jacobs. "Senior Leadership Performance Requirements at the Executive Level." Research report. (Alexandria, VA: Army Research Institute, 1985), 1.

¹⁶ Harris, P., and K.W. Lucas. Executive Leadership: Requisite Skills and Developmental Processes for Three- and Four-Star Assignments. Research report. (Alexandria, VA: Army Research Institute, 1994.), 6.

¹⁷ Ibid., 4.

¹⁸ Jacobs, T. Owen. "A Guide to the Strategic Leader Development Inventory." In *Leadership and Ethics*. Edited by Gail Arnott et al. (Maxwell AFB, AL: Air University Press, 1997), 79-105.

¹⁹ Ibid., 85-86.

²⁰ Ibid., 86.

²¹ Hurry, Linda S. "Measuring Behaviors of Air Force Officers as Indicators of Effective Performance and Leadership." Master's thesis. (Air Force Institute of Technology, 1995), 3-6.

²² Van Scotter, James R. "Evidence for the Usefulness of Task Performance, Job Dedication, and Interpersonal Facilitation as Components of Performance." Ph.D. diss. (University of Florida, 1994), 21, 24.

²³ Hurry, "Measuring Behaviors of Air Force Officers," 3-4.

²⁴ Ibid., 40, 41, 46-47.

²⁵ Yukl, Gary A. *Leadership in Organizations (Second Edition)*. (Englewood Cliffs, NJ: Prentice Hall, 1989), 69.

²⁶ Yukl, G., S. Wall, and R. Lepsinger, R. "Preliminary Report on Validation of the Managerial Practices Survey." In *Measures of Leadership*. Edited by K.E. Clark and M.B. Clark. (West Orange, NJ: Leadership Library of America, 1990), 223-235.

²⁷ Yukl, *Leadership in Organizations*. . . , 72.

²⁸ Yukl, "Preliminary Report. . .," 65-67.

²⁹ Hughes, Richard L.; Robert C. Ginnett; and Gordon J. Curphy. *Leadership: Enhancing the Lessons of Experience*. (Illinois: Irwin, 1993), 192.

³⁰ Morabito, Michael A. "Analysis of Air Force Junior Aircraft Maintenance Officer Leadership Development." Master's thesis (Air Force Institute of Technology, 1985) 29.

Notes

³¹ Jennings, Gilbert W. “Leadership Self-Efficacy: Measuring the Effects of Leadership Training at Squadron Officer School.” Master’s thesis (Air Force Institute of Technology, 1991), 2-5.

³² Taylor, Ralph S. “Redefining Leadership Skills for Instructor Pilots—A Hierarchical Analysis of Flightline Job Roles and Responsibilities.” Research project (Embry-Riddle Aeronautical University, 1997), 7.

³³ Ibid., 31.

³⁴ Ibid., 15.

Chapter 3

Methodology

The subjects for this study were Air Force students at Air University, Maxwell AFB, Alabama. The instrument used to collect the data was the Managerial Practices Survey, designed and validated by Dr. Gary Yukl (Yukl, 1989).

Subjects

Company Grade Officers

Three subsets of subjects constitute the participants for this study. All subjects participated voluntarily, and a holistic sampling technique was applied. The first subset consisted of 569 USAF company grade officers (CGOs) of Squadron Officer School (SOS) Class 98-A. Table 2 shows that 78.4% of these officers have between 4 and 7 years-of-commissioned-service while over 70% of CGOs in the Air Force do not fall into this range. Table 3 shows a general similarity between the subjects and AF CGOs at large for career field distribution. The exception is the medical career field, which is underrepresented at 12.3% versus 17.9%. Table 4 shows SOS gender distribution (males = 83.7%, females = 16.3%) is also similar to AF CGOs (males = 81.1%, females = 18.9%). Therefore, factors contributing to the generalizability of this study to AF CGOs

are the gender and career field distributions, with the exception of the medical career field. A factor limiting generalizability is years-of-commissioned-service.

Table 2. Years of Commissioned Service

	Class Breakdown by Years of Commissioned Service (%)				
	< 4 yrs.	4–7 yrs.	7.1–11 yrs.	11.1–15 yrs.	>15 yrs.
AWC (n=41)	0.0	0.0	0.0	0.0	100.0
AF O-5 (n=10,148)	0.0	0.0	0.5	3.4	96.1
ACSC (n=302)	0.0	0.0	7.6	87.1	5.3
AF O-4 (n=15,652)	2.7	2.4	7.2	55.3	32.4
SOS (n=569)	1.9	78.4	18.5	1.2	0.0
AF CGO (n=43,484)	40.0	24.3	28.8	6.1	0.8

Source for AF stats: Air Force Personnel Center. *Personnel Statistics: Officer Demographics*, 1997, n.p.; on-line, Internet, 19 December 1997, available from <http://www.afpc.af.mil>.

Table 3. Career Field Distribution

AFSC	Overall N = 912 (%)	Overall AF O-1-O-5 N = 69,284 (%)	SOS n = 569 (%)	AF CGO n = 43,484 (%)	ACSC n = 302 (%)	AF O-4 n = 15,652 (%)	AWC n= 41 (%)	AF O-5 n = 10,148 (%)
1X	49.0	38.8	50.4	38.3	47.4	40.0	41.4	38.0
2X	7.8	6.0	6.2	5.8	10.3	5.2	12.2	8.3
3X	18.2	14.2	16.5	14.8	21.2	12.0	17.0	15.0
4X	9.1	18.3	12.3	17.9	3.0	20.5	9.8	16.3
5X	2.8	3.0	3.0	2.1	1.7	3.2	4.8	3.2
6X	12.5	11.8	10.9	11.8	15.9	11.9	12.2	11.5
71	0.8	0.0	0.0	1.0	1.0	0.0	2.4	0.0

1X: Operations

3X: Support

5X: Professional

7X: OSI

2X: Logistics

4X: Medical

6X: Acquisition

Source for AF stats: Air Force Personnel Center. *Personnel Statistics: Officer Demographics*, 1997, n.p.; on-line, Internet, 19 December 1997, available from <http://www.afpc.af.mil>.

Table 4. Gender Distribution

Gender	Overall <u>N</u> = 912 (%)	Overall AF O-1- O-5 <u>N</u> = 69,284 (%)	SOS <u>n</u> = 569 (%)	AF CGO <u>n</u> = 43,484 (%)	ACSC <u>n</u> = 302 (%)	AF O-4 <u>n</u> = 15,652 (%)	AWC <u>n</u> = 41 (%)	AF O-5 <u>n</u> = 10,148 (%)
Male	84.5	83.1	83.7	81.1	86.4	85.9	82.9	87.8
Female	15.5	16.9	16.3	18.9	13.6	14.1	17.1	12.2

Source for AF stats: Air Force Personnel Center. *Personnel Statistics: Officer by Gender*, 1997, n.p.; on-line, Internet, 30 November 1997, available from <http://www.afpc.af.mil>.

Majors

The second subset of subjects consisted of 302 USAF majors (O-4s) at the USAF Air Command and Staff College (ACSC) Class AY-98. Unlike SOS, attendance at this school is competitive. Although exact numbers were not available, existing data seem to indicate that attendance is limited to approximately the upper 8% of AF majors.¹ Table 2 shows that a large majority (87.1%) of these students have more than 11 but less than 15 years-of-commissioned-service, in contrast to the Air Force-wide figure of 55.3%. This difference is a result of the requirement that officers eligible to attend ACSC must enroll within the first three years of their promotion to major. The one outstanding difference in career field representation seen in Table 3 is the under-representation of medical personnel (AF = 20.5%, ACSC = 3.0%), possibly due to the limit on the absolute number of medical officers that are afforded attendance. The line career fields are generally represented at ACSC in the same proportions as in the AF. Table 4 shows the gender proportions close to the AF: ACSC males = 86.4%, females = 13.6%; AF males = 85.9%, females = 14.1%. Factors contributing to generalizability of this study to AF majors are the representative distributions by gender and career field, with the exception of medical personnel. Factors limiting generalizability are the differences in years-of-

commissioned-service and the pre-selection of the subjects due to the competitive selection for attendance at this school.

Lieutenant Colonels

The final subset consisted of 41 AF lieutenant colonels (O-5s) who were students at the USAF Air War College (AWC) Class AY-98. Attendance at this school is also a competitive process. Although exact figures were not available, information on the selection process seems to indicate that approximately the top 5% of O-5s are selected for attendance.² Table 2 shows a very close match between the years-of-commissioned-service between these students and AF O-5s at large: 100.0% and 96.1%, respectively. The line officer representation by career field, seen in Table 3, is close to AF proportions. Medical officers were not nearly as underrepresented as they were at ACSC: AF = 16.3%, AWC = 9.8%. Table 4 shows the male and female percentages of this population to be 82.9% and 17.1%, respectively, compared to 87.8% and 12.2% for the Air Force. Factors contributing to the generalizability of this study to AF O-5s are the similar distributions by gender, years-of-commissioned-service, and career field, with the low representation of medical officers as a concern. Generalizability is limited by the preselection of the subjects through the competitive selection process for school attendance.

Instrumentation

The instrument used for this study was an off-the-shelf, self-reporting survey called the Managerial Practices Survey (MPS), developed by Yukl, 1989. The survey (Appendix E) consists of three parts: Part I, demographics; Part II, behavior importance

ratings; Part III, relative importance ratings and behavior requiring most improvement. The second and third parts were developed and validated by Dr. Yukl, resulting in a reliable ($r = 0.9$) and valid ($r = 0.4$) instrument (Yukl, 1989).³

Only Parts I and II were used as a macro-survey for this study. Part II asks the respondents to rate the perceived importance of each of the eleven behaviors to their last job before becoming a student. The possible responses are: 1 = not relevant; 2 = slightly important; 3 = moderately important; 4 = very important; 5 = absolutely essential.

Procedures

The research procedures included survey administration approval, a pilot study, administrative modifications, data collection, and analysis.

To obtain approval to administer the surveys, a request package was sent to SOS, ACSC, AWC, and to Air University, the parent command for these schools, in accordance with the procedures outlined in AFI 36-2601 (10 June 1994), AU Supplement 1 (10 March 1992), and ACSC OI 37-103 (18 August 1997). From the time a complete package was ready for coordination, the approval process took approximately six weeks. The completed and approved package is on file at the Directorate of Evaluation, ACSC (ACSC/CVV).

The pilot study consisted of administering the instrument to five of the 44 seminars at ACSC, which totaled about 60 subjects. The student seminar leaders administered the surveys according to the written instructions while a researcher observed without providing any direction. After the subjects completed the surveys, the researcher discussed with them any problems they encountered. To determine if any administrative

modifications were required, the five researchers met to discuss all the problems they observed. Appropriate changes were made and the final version appears in Appendix E.

Data collection was conducted at SOS en masse in the school's auditorium. The research team conducted this administration personally. For the two other schools, the survey was given to their respective evaluation departments to administer and collect over a period and in a manner that fit their schedules. The return rates were: SOS, 86.1%; ACSC, 73.3%; AWC, 26.1%.

To analyze the data, it was first manually entered into SPSS for Windows for processing. This package was used to generate the demographic statistics. It was also used to compute the means and standard deviations of the Part II importance ratings for the overall population of subjects and the three sub-groups. Finally, SPSS was used to perform a one-way ANOVA to test the hypotheses, and Tukey-B was used as the post hoc multiple comparison procedure.

Limitations

Limitations of the study include the Hawthorne effect, self-perception, and pre-selection of the subjects. First, although the subjects were asked to respond based on their last jobs, they were all students in programs in which their leadership performance was part of the program evaluations. Therefore, the experiment may have biased them towards increased importance ratings in the same way that the Hawthorne effect supposedly results in increased self-perceived importance (Benson, 1994).⁴ Second, self-reporting may also be a source of bias due to subjectivity. This can sometimes be off-set by observations from superiors, subordinates, or coworkers, but because the ratings were based on previous jobs, such observations were not available. Finally, although the

subjects were representative of the USAF in terms of gender and career fields, attendance at ACSC and AWC is limited to the upper 8% of majors and upper 5% of lieutenant colonels.⁵ Therefore, the leadership requirements of these selective groups may differ in ways beyond the ability of this study to detect.

Notes

¹ Air Force Personnel Center. *Officer Professional Military Education: Q&A for ISS and SSS*, 1997, n.p.; on-line, Internet, 11 September 1997, available from <http://www.afpc.af.mil>.

² Ibid., n.p.

³ Yukl, G., S. Wall, and R. Lepsinger, R. "Preliminary Report on Validation of the Managerial Practices Survey." (In *Measures of Leadership*, Clark and Clark, 1990), 70

⁴ Benson, P.G., "The Hawthorne Effect," in *Encyclopedia of Psychology*, Vol. 2, ed. Raymond J. Corsini (New York: Wiley and Sons, 1994), 108.

⁵ Air Force Personnel Center. *Officer Professional Military Education: Q&A for ISS and SSS*, 1997, n.p.; on-line, Internet, 11 September 1997, available from <http://www.afpc.af.mil>.

Chapter 4

Results

The Managerial Practices Survey (MPS), the instrument used for this study, (Appendix E) consists of three parts: Part I, demographics; Part II, behavior importance ratings; Part III, relative importance ratings and behavior requiring most improvement. The survey supported several studies, but only Parts I and II were used for this study. Part II asks the respondents to rate the perceived importance of each of the eleven behaviors to their last job before becoming a student. The study tested three hypotheses:

- H1: The importance ratings reported by AF company grade officers (CGOs) and majors (O-4s) are equal for the eleven Yukl behaviors: informing, consulting, planning, problem solving, clarifying, monitoring, motivating, recognizing/rewarding, supporting, managing conflict, networking.
- H2: The importance ratings reported by AF company grade officers (CGOs) and lieutenant colonels (O-5s) are equal for the eleven Yukl behaviors.
- H3: The importance ratings reported by AF majors (O-4s) and lieutenant colonels (O-5s) are equal for the eleven Yukl behaviors.

Mean Importance Ratings

Overall

The total population consisted of 912 USAF officers, from captains (O-3) to lieutenant colonels (O-5). The means and standard deviations of importance ratings for each behavior overall and by rank are in Table 5. The lowest overall mean was 3.4 with a

standard deviation of 1.1 for the behavior of networking. The highest mean rating was for informing at 4.4 with a standard deviation of 0.7.

Table 5. Mean Importance Ratings

Behavior	Overall (<u>N</u> = 912)		SOS (<u>n</u> = 569)		ACSC (<u>n</u> = 302)		AWC (<u>n</u> = 41)	
	<u>M</u>	<u>SD</u>	M	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Informing	4.4	0.7	4.4	0.7	4.4	0.7	4.6	0.6
Consulting	4.0	0.8	4.0	0.8	4.0	0.8	4.1	0.8
Planning	4.1	0.9	4.1	0.9	4.0	0.8	4.2	0.7
Problem Solving	4.2	0.8	4.2	0.8	4.2	0.8	4.1	0.7
Clarifying Roles	4.0	0.9	3.9	0.9	4.0	0.9	4.0	1.0
Monitoring	3.7	0.9	3.8	0.9	3.6	0.9	4.0	0.8
Motivating	3.9	1.0	3.9	1.0	4.0	1.0	4.3	1.0
Recognizing and	3.9	1.0	3.8	1.0	4.1	1.0	4.2	0.9
Supporting	3.8	1.0	3.7	1.0	3.7	1.0	4.1	1.0
Managing Conflict	3.8	1.0	3.7	1.0	3.9	0.9	4.0	0.9
Networking	3.4	1.1	3.4	1.1	3.4	1.0	3.6	.95

Company Grade Officers (CGOs)

The CGOs consisted of 569 captains at the USAF Squadron Officer School (SOS). Their lowest mean importance rating was for the networking behavior: 3.4 with a standard deviation of 1.1. The highest mean rating was 4.4 for the informing behavior, which had a standard deviation of 0.7.

Majors (O-4)

The O-4 subjects consisted of 302 USAF officers at the Air Command and Staff College (ACSC). Their lowest rating was for networking with a mean of 3.4 and standard deviation of 1.0. Their highest rating, as for the CGOs, was for informing with a mean of 4.4 and standard deviation of 0.7.

Lieutenant Colonels (O-5)

The O-5 subjects were students at the USAF Air War College (AWC). As for the other two groups and the overall population, networking received the lowest mean importance rating, with a mean of 3.6 and standard deviation of 1.0. The highest rated behavior was also the same as the other two groups and for the population overall: informing at 4.6 and a standard deviation of 0.6.

Hypothesis Testing

The first hypothesis was not supported because the importance ratings of recognizing/rewarding were not equal. The importance rating of recognizing/rewarding was higher for O-4s ($\underline{M} = 4.1$) than CGOs ($\underline{M} = 3.8$). The second hypothesis was not supported because the importance ratings of four behaviors were higher for O-5s than CGOs: informing ($\underline{M}_{O-5} = 4.6$, $\underline{M}_{CGO} = 4.4$), recognizing/rewarding ($\underline{M}_{O-5} = 4.2$, $\underline{M}_{CGO} = 3.8$), motivating ($\underline{M}_{O-5} = 4.3$, $\underline{M}_{CGO} = 3.9$), and supporting ($\underline{M}_{O-5} = 4.1$, $\underline{M}_{CGO} = 3.7$). The third hypothesis was supported. The importance ratings of all eleven behaviors were found to be equal between O-4s and O-5s.

Chapter 5

Discussion

This chapter reviews the hypotheses and results of the hypotheses testing, then relates the results and trends to the underlying theories. Implications of these results to the Air Force are discussed. Finally, recommendations for further research are proposed.

Hypotheses

- H1: The importance ratings reported by AF company grade officers (CGOs) and majors (O-4s) are equal for the eleven Yukl behaviors: informing, consulting, planning, problem solving, clarifying, monitoring, motivating, recognizing/rewarding, supporting, managing conflict, networking.
- H2: The importance ratings reported by AF company grade officers (CGOs) and lieutenant colonels (O-5s) are equal for the eleven Yukl behaviors.
- H3: The importance ratings reported by AF majors (O-4s) and lieutenant colonels (O-5s) are equal for the eleven Yukl behaviors.

Results

The importance rating of recognizing/rewarding was significantly higher: O-4s ($\underline{M} = 4.1$), CGOs ($\underline{M} = 3.8$). Therefore, the first hypothesis was not supported. The importance ratings of four behaviors were higher for O-5s than CGOs: informing ($\underline{M}_{O-5} = 4.6$, $\underline{M}_{CGO} = 4.4$), recognizing/rewarding ($\underline{M}_{O-5} = 4.2$, $\underline{M}_{CGO} = 3.8$), motivating ($\underline{M}_{O-5} = 4.3$, $\underline{M}_{CGO} = 3.9$), and supporting ($\underline{M}_{O-5} = 4.1$, $\underline{M}_{CGO} = 3.7$). Therefore, the second hypothesis was not supported. The importance ratings of all eleven behaviors were found to be equal between O-4s and O-5s. Therefore, the third hypothesis was supported.

Hypothesis 1

H1: The importance ratings reported by AF CGOs and majors (O-4s) are equal for the eleven Yukl behaviors: informing, consulting, planning, problem solving, clarifying, monitoring, motivating, recognizing/rewarding, supporting, managing conflict, networking.

This hypothesis was not supported. The importance rating of recognizing/rewarding was higher for O-4s ($\underline{M} = 4.1$) than CGOs ($\underline{M} = 3.8$).

Theory. This result appears to be consistent with Stratified Systems Theory (SST) and the Army's DAP 600-80: CGOs and O-4s appear to be within the same hierarchical domain, but at different strata. These models depict organizations as a hierarchy of three broad levels which SST calls "domains." As shown in Table 6, SST further subdivides the three domains into "strata" and associates them with particular ranks (Jaques, 1989).¹

Table 6. Stratified Systems Theory

STRATA	DOMAIN	RANK	TASK COMPLEXITY
VII	Systems/ Strategic	O-10	More Complex ↑
VI		O-9	
V	General	O-8	
IV		O-6 – O-7	
III	Direct	O-4 – O-5	↓ Least Complex
II		O-1 – O-3	
I		Enlisted	

Source: Harris, P., and K.W. Lucas. *Executive Leadership: Requisite Skills And Developmental Processes For Three- And Four-Star Assignments*. Research Report. Alexandria, Va: Army Research Institute, 1994, 7.

SST and DAP 600-80 further state that ranks within the same domain share two characteristics: (1) in general, there is not a great overall difference between their leadership requirements and (2) specifically, there is little difference in the complex problem solving ability required of them. Based on the results of this test, then, CGOs and O-4s appear to be in the same domain because (1) only one of the eleven behaviors

was more important for O-4s and (2) this difference was not for a behavior associated with complex problem solving. SST also asserts that while officers may be in the same domain, they may not necessarily be in the same strata within that domain unless their leadership requirements are equal. Therefore, CGOs and O-4s, although in the same domain, seem to be in different strata because their leadership requirements were not exactly equal: there was a difference between them in the importance of one behavior.

Because a domain covers such a large range of ranks, hierarchical theory for the Air Force needs to focus on the finer differences that distinguish strata, rather than the broad differences that distinguish domains. The Managerial Practices Survey used for this study seems to be able to distinguish between these smaller strata within the three domains and is therefore a useful tool for this research.

Implications. The results may have two implications for the Air Force. First, the eleven behaviors appear to form a continuum of important leadership behaviors for AF officers. Because the lowest mean importance rating of any behavior for any group was 3.4 (3 = moderately important), all the behaviors appear relevant to leadership performance to some extent. Therefore, if leadership education in pre-commissioning programs should cover these behaviors, it will not only serve officers immediately, but will also provide a continuum for subsequent PME teaching, thereby addressing leadership development for an officer's entire career. Second, AF PME for CGOs (SOS) may need to include an increased emphasis on recognizing/rewarding, providing skill in the behavior before it is needed, because it increases in importance for O-4s. Including this increased emphasis at SOS would be a preemptive measure, providing officers appropriate tools before reaching the grade of O-4.

Hypothesis 2

H2: The importance ratings reported by AF CGOs and lieutenant colonels (O-5s) are equal for the eleven Yukl behaviors.

This hypothesis was not supported. The importance ratings of four behaviors were higher for O-5s than CGOs: informing ($\underline{M}_{O-5} = 4.6$, $\underline{M}_{CGO} = 4.4$), recognizing/rewarding ($\underline{M}_{O-5} = 4.2$, $\underline{M}_{CGO} = 3.8$), motivating ($\underline{M}_{O-5} = 4.3$, $\underline{M}_{CGO} = 3.9$), and supporting ($\underline{M}_{O-5} = 4.1$, $\underline{M}_{CGO} = 3.7$).

Theory. These results are consistent with SST and DAP 600-80. First, these theories place these ranks in the same domain, and the results seem to support this. Recall that the characteristics of ranks in the same domain are (1) few overall differences in their leadership requirements and (2) little difference in the complex problem solving ability required of them. The results therefore seem to place CGOs and O-5s in the same domain because (1) only a minority of the importance ratings (four out of eleven) were found to be greater for O-5s and (2) none of the behaviors that were more important were related to complex problem solving. The second way in which these results are consistent is that, while the ranks appear to be in the same domain, they seem to be in different strata within that domain. This is based on the fact that, although there was a difference in only a minority of the behaviors, there was still some difference. The leadership requirements of the two groups are still not equal, as is the case for ranks in different strata. This is exactly the relationship shown in Table 6: CGOs and O-5s are both in the Direct Domain, but in strata II and III, respectively. In summary, differences exist in the leadership requirements of CGOs on one hand, and O-4s and O-5s on the other. However, the differences are not dramatic and certainly do not include an

increased need for complex problem solving ability. Therefore, up to the O-5 grade, officers do not cross a significant threshold from one domain to the next.

Implications. These results also have implications on the phasing of leadership curricula in the Air Force PME continuum. In addition to the importance of the four behaviors being significantly greater for O-5s, there was a trend for all eleven behaviors to be more important for O-5s than for CGOs (Appendix G). Therefore, leadership behaviors learned early in an officer's career appear to be relevant not only as O-4s, but O-5s, as well. Up to that rank there still seem to be no behaviors that can be "discarded" for lack of importance. On the contrary, the trend of overall increase in behavior importance indicates more emphasis may need to be placed on the behaviors, especially for the four that were significantly more important. Because Air Command and Staff College (ACSC) is the last PME opportunity before becoming an O-5, this seems to be the logical point at which to provide this reemphasis on the leadership behaviors and a preemptive, increased emphasis on the four behaviors expected to become more important.

Hypothesis 3


H3: The importance ratings reported by AF majors (O-4s) and lieutenant colonels (O-5s) are equal for the eleven Yukl behaviors.

The third hypothesis was supported. The importance ratings of all eleven behaviors were found to be equal between O-4s and O-5s.

Theory. This result is consistent with SST, which places both ranks in stratum III, indicating they should have the same leadership requirements. The hypothesis testing supports this by finding no significant difference in the importance of any of the behaviors. In summary, the SST description of civilian and military organizations and

the DAP 600-80 description of the Army seem to parallel the findings of this study for the Air Force: CGOs, O-4s, and O-5s appear to be in the same domain because there are few differences in importance of leadership behaviors, and no differences in importance of behaviors associated with performing complex tasks. In addition, a general trend of increasing importance of leadership behaviors for higher ranks can also be seen in Table 7. In this table, the shaded cells represent mean importance ratings of 4.0 or higher.

Table 7. Increasing Importance of Behaviors

Category	Behaviors	CG O	O-4	O-5
Building Relationships	Networking			
	Supporting/Mentoring			
	Managing Conflict			
Influencing People	Recognizing/Rewarding			
	Motivating			
Giving and Seeking Information	Monitoring Operations			
	Clarifying Roles			
	Informing			
Making Decisions	Planning/Organizing			
	Problem Solving			
	Consulting/Delegating			
 Importance rating ≥ 4.0				

Implications. The PME implications of this result are more subtle than previous ones. What is straightforward is that within stratum III there does not appear to be even a minor hierarchical level separating O-4s and O-5s. Therefore, the portion of the ACSC leadership curriculum dealing with preparation for the next rank may only have to provide a “refresher” on leadership behaviors in addition to emphasizing the behaviors found to be more important to O-5s than to CGOs.

However, another interesting implication relates to the preparation of O-4s and O-5s for colonel (O-6) leadership. SST places the O-6 rank in the next highest domain above O-4s and O-5s, indicating a major change in leadership requirements as an officer goes from O-5 to O-6 (Jaques, 1985).² The Air Force seems to recognize the uniqueness of the O-6 grade by, for example, the separate assignment system for O-6s. Because the leadership requirements of a job are determined by the demands of the work environment (for example, the complexity of required tasks, number of subordinates, or command versus supervisory position), a new set of important leadership behaviors implies a new set of job experiences. How this applies to the promotion to O-6 may be stated as follows: an officer who becomes an O-6 will require leadership behaviors he has never required before because he will experience job demands he has never experienced before. The implication of this statement is that job experiences an officer will have up to the O-5 grade are not representative of the experiences he will incur in the future as an O-6. Those experience will not, therefore, be sufficient by themselves to prepare an officer for O-6. This places more importance on the role of PME in officer leadership development. PME, and in particular ACSC and Air War College (AWC), may be the only institutional opportunity to facilitate the transition to the new leadership requirements of O-6. However, developing the curricula at these schools to accomplish this task should not happen until it is determined (1) if a change in leadership requirements does exist when going to O-6 and (2) which behaviors become more or less important.

Summary/Conclusions

This study provides empirical support to the applicability of Stratified Systems Theory and the US Army's leadership model, as described in DAP 600-80, to the US Air

Force. Specifically, CGOs, O-4s, and O-5s appear to be in the same domain because their differences in importance of the various leadership behaviors are minor, and there are no apparent differences in their requirement for complex problem solving. However, the minor differences between CGOs on the one hand and O-4s and O-5s on the other would indicate that these two groups, while all in the same domain, are in different strata. Furthermore, these findings also seem to imply that for these officers, the eleven Yukl behaviors are a core of common, important, relevant leadership behaviors for USAF officers in which some behaviors become incrementally more important as rank increases. These behaviors can therefore form a core of leadership curricula for the various AF officer PME schools.

Recommendations

The recommendations focus on two areas: improving the survey instrument and expanding the study to other groups. Although the Managerial Practices Survey successfully distinguished between strata, a more sensitive instrument would be helpful in distinguishing possible differences between ranks within the strata. Recall that Jennings found it necessary to modify the MPS to improve its ability to discriminate between levels of behavior importance (Jennings, 1991).³ Furthermore, it may be useful repeat this study, but with the eleven behaviors broken down further into their sub-behaviors. For instance, informing could be broken down into its sub-behaviors of “disseminating relevant information”, “answering requests”, and “promoting the organization” (Appendix D). These sub-behaviors would then be rated individually for their importance. This approach may be useful in examining the behaviors of groups with highly specialized leadership requirements, like particular Air Force specialties.

Finally, the opposite approach may also be taken: the study could be repeated with the eleven Yukl behaviors grouped into their categories. For instance, motivating and recognizing/rewarding would be grouped into “Influencing People” (Appendix D). The categories would then be rated for importance, not the individual behaviors. This more general approach may be more appropriate in trying to map the variation in leadership requirements for a very large organization, like the entire enlisted and officer corps of the Air Force. Both of these cases would require that the MPS be validated in these more specific and more general forms.

With the MPS modified as described above, the study can be duplicated in several ways to gain greater insight into the nature of hierarchical leadership in the Air Force. First, the study can be expanded vertically by application to the enlisted corps and to the ranks above O-5, where this study stopped. For colonels and flag officers, the initial study could be based on the “four categories” version of the MPS mentioned above. This initial macro-level study would be to determine if the officer corps is indeed divided into three broad domains of leadership requirements. Having determined the location of the boundaries between domains, a follow-on study could then investigate more precisely the location of strata, if any, within those domains. The study can be expanded horizontally by duplicating it for particular career fields. Air Force career fields tend to be well-defined “stovepipes,” each with their own culture and particular leadership processes and requirements—in other words, their own leadership environments. What has been found to be true for USAF officers in general may be quite different for each stovepipe.

Notes

¹ Jaques, Elliott. *Requisite Organization* (USA: Cason Hall, 1989), 10.

Notes

² Jaques, E., S. Clement, C. Rigby, and T.O. Jacobs. "Senior Leadership Performance Requirements at the Executive Level." Research report. (Alexandria, VA: Army Research Institute, 1985), 1.

³ Jennings, Gilbert W. "Leadership Self-Efficacy: Measuring the Effects of Leadership Training at Squadron Officer School." Master's thesis (Air Force Institute of Technology, 1991), 2-5.

Appendix A

US Army Adaptation of SST

STRATA	TIME-SPAN	RANK	DOMAIN	TASKS
VII	20 – 50 YRS	O-10	Systems/ Strategic	Creates complex systems; organizes acquisition of major resources; creates policy.
VI	10 – 20 YRS	O-9		Oversees operation of subordinate systems; applies policy.
V	5 – 10 YRS	O-8	General Command	Direct operation of complex systems.
IV	2 - 5 YRS	O-6 – O-7		Tailor resource allocations to interdependent subordinate programs or units.
III	1 – 2 YRS	O-4 – O-5	Direct Command	Develop and execute plans to implement policy/assigned missions.
II	3 MOs – 1 YR	O-1 – O-3		Direct performance of work; anticipate/solve real-time problems.
I	1 DAY – 3 MOs	Enlisted		Hands-on work performance; use practical judgment to solve ongoing problems.
* An eighth stratum may exist in larger organizations.				

Source: Harris, P., and K.W. Lucas. *Executive Leadership: Requisite Skills and Developmental Processes for Three- and Four-Star Assignments*. Research report. (Alexandria, VA: Army Research Institute, 1994.), 7.

Appendix B

Strategic Leader Development Inventory

CONCEPTUAL SKILLS AND ABILITIES	POSTIVE ATTRIBUTES	NEGATIVE ATTRIBUTES
Professional Competence	Interpersonal Competence	Technical Incompetence
Conceptual Flexibility	Empowering Subordinates	Self-serving/Unethical
Future Vision	Team Performance Facilitation	Micromanager
Conceptual Competence	Objectivity	Arrogant
Political Sensitivity	Initiative/Commitment	Explosive/Abusive
		Inaccessible

Source: Jacobs, T. Owen. "A Guide to the Strategic Leader Development Inventory." In *Leadership and Ethics*. Edited by Gail Arnott et al. (Maxwell AFB, AL: Air University Press, 1997), 88.

Appendix C

Behaviors of the Four-Factor Model

Leadership Behaviors

- Behaving consistently.
 - Assigning subordinates duties and responsibilities appropriate for their abilities.
 - Guiding and directing subordinates effectively.
 - Using good judgment.
 - Recognizing and encouraging effective performance.
 - Stimulating effective cooperation among others.
 - Reconciling conflicting organizational demands.
 - Maintaining high visibility both on and off the job.
 - Supporting subordinates.
 - Ensuring deadlines and performance standards are met.
 - Representing the group effectively.
 - Speaking effectively.
 - Avoiding trespassing on pre-delegated responsibility areas.
 - Making tough decisions quickly.
 - Providing appropriate feedback to subordinates.
 - Reacting confidently when the unexpected occurs.
 - Taking a position on controversial issues.
 - Working to create an effective organizational atmosphere.
 - Persuading others both inside and outside the organization.
 - Resolving conflicts between members of the organization.
 - Coordinating subordinates' efforts to minimize conflicts.
 - Monitoring the status of work in progress.
- Source:** Hurry, Linda S. "Measuring Behaviors of Air Force Officers as Indicators of Effective Performance and Leadership." Master's thesis. (Air Force Institute of Technology, 1995), 17.

Task Performance Behaviors

- Performing routine tasks efficiently.
- Solving urgent, unexpected problems expertly.
- Using equipment, tools, computers, etc. proficiently.
- Performing specialized tasks skillfully.
- Writing clearly and concisely.
- Operating equipment.
- Providing others with current technical information.
- Prioritizing work tasks efficiently.
- Anticipating potential problems.
- Communicating task information effectively.
- Planning and organizing work.
- Troubleshooting expertly.
- Collecting and accurately interpreting information.
- Keeping up with the newest technology.
- Performing safely.
- Using technical expertise to meet real world needs.
- Providing expert technical advice to others.
- Using technical material effectively.
- Solving technical problems expertly.
- Accomplishing job tasks expertly.

Source: Hurry, Linda S. “Measuring Behaviors of Air Force Officers as Indicators of Effective Performance and Leadership.” Master’s thesis. (Air Force Institute of Technology, 1995), 19.

Interpersonal Behaviors

- Supporting or encouraging a coworker.,
- Talking to others before taking actions that affect them.
- Treating others fairly.
- Helping someone without being asked.
- Developing and maintaining good working relationships.
- Displaying concern for others.
- Coordinating actions with others.
- Showing respect for others.
- Encouraging coworkers to stick together in hard times.
- Cooperating with others in the team effectively.
- Displaying a cheerful, confident outlook.
- Considering other's needs before acting.
- Warning the boss about an upcoming situation.
- Offering to help others do their work.
- Voluntarily pitching in to help the group.
- Lending a hand when a coworker needs it.
- Praising coworkers when they are successful.
- Listening to others ideas about getting work done.
-
- Give coworkers advice about how to do their jobs.

Source: Hurry, Linda S. "Measuring Behaviors of Air Force Officers as Indicators of Effective Performance and Leadership." Master's thesis. (Air Force Institute of Technology, 1995), 20.

Job Dedication Behaviors

- Paying close attention to important details.
- Taking the initiative to solve a work problem.
- Overcoming obstacles to complete a task.
- Tackling a difficult work assignment enthusiastically.
- Striving to excel.
- Ensuring work is done right.
- Performing consistently and reliable.
- Persisting in the face of adversity.
- Complying with instructions even when supervision are not present.
- Volunteering for additional duties.
- Putting extra effort into a task.
- Exercising personal discipline and self-control.
- Giving up personal time for the mission.
- Adapting to difficult conditions.
- Overcoming hardships.
- Showing respect for authority.
- Volunteering for a difficult assignment.
- Putting in extra hours to get work done on time.
- Defending the supervisor's decisions.
- Displaying proper military appearance and bearing.
- Rendering proper military courtesy.
- Working hard.

Source: Hurry, Linda S. "Measuring Behaviors of Air Force Officers as Indicators of Effective Performance and Leadership." Master's thesis. (Air Force Institute of Technology, 1995), 22.

Appendix D

Yukl's Taxonomy

Making Decisions	Planning and Organizing: determining long-term objectives/strategies, allocating resources according to priorities, determining how to use personnel/resources to accomplish a task efficiently, and determining how to improve coordination, productivity, and the effectiveness of the organizational unit.
	Problem Solving: identifying work-related problems, analyzing problems in a timely but systematic manner to identify causes and find solutions, and acting decisively to implement solutions to resolve important problems or crises.
	Consulting and Delegating: checking with people before making changes that affect them, encouraging suggestions for improvement, inviting participation in decision making, incorporating the ideas and suggestions of others in decisions, and allowing others to have substantial responsibility and discretion in carrying out work activities and making decisions.
Influencing People	Motivating: using influence techniques that appeal to emotion or logic to generate enthusiasm for the work, commitment to task objectives, and compliance with requests for cooperation, assistance, support, or resources; setting an example of appropriate behavior.
	Recognizing and Rewarding: providing praise and recognition, and rewards for effective performance, significant achievements, and special contributions.
Building Relationships	Networking: socializing informally, developing contacts with people who are a source of information and support, and maintaining contacts through periodic interaction, including visits, telephone calls, correspondence, and attendance at meetings and social events.
	Managing Conflict and Team Building: encouraging and facilitating the constructive resolution of conflict, and encouraging cooperation, teamwork, and identification with the organizational unit..
	Supporting and Mentoring: acting friendly and considerate, being patient and helpful, showing sympathy and support, and doing things to facilitate someone's skill development and career advancement.
Giving/Seeking Info	Monitoring Operations and Environment: gathering information about work activities, checking on the progress and quality of the work, evaluating the performance of individuals and the organizational unit, and scanning the environment to detect threats and opportunities..
	Clarifying Roles and Objectives: assigning tasks, providing direction in how to do the work, and communicating a clear understanding of job responsibilities, tasks, deadlines, and performance expectations..
	Informing: disseminating relevant information about decisions, plans, activities to people that need it to do their work; answering requests for technical information; and telling people about the organizational unit to promote its reputation..
Source: Yukl, Gary A. <i>Leadership in Organizations</i> (Englewood Cliffs, NJ: Prentice Hall, 1994), 65.	

Appendix E

Survey

STAFF SUMMARY SHEET							
	TO	ACTION	SIGNATURE (Surname), GRADE AND DATE		TO	ACTION	SIGNATURE (Surname), GRADE AND DATE
1	AWC/CC	Appr		6			
2	SOS/CC	Appr		7			
3				8			
4				9			
5				10			
SURNAME OF ACTION OFFICER AND GRADE			SYMBOL		PHONE		TYPIST'S INITIALS
Berry, Maj			ACSC/Sem 40		3-2060		wdb
SUBJECT							DATE
Leadership Behaviors Survey							17 Nov 97

SUMMARY

1. The Leadership Behaviors Survey at Tab 1 was approved by HQ AU for administration at all Air University schools. This package is requesting the AWC and SOS Commandants' approval to conduct this survey at their schools NLT 19 December 1997.
2. The survey supports an ACSC Research project attempting to define and characterize those critical leadership behaviors needed at the various levels of responsibility in a military organization. The target audience is the student body at each school. The survey, based upon a validated version of Dr. Gary Yukl's Managerial Practices Survey, should take only 5-10 minutes to complete. The survey will be administered by coordinating with the appropriate offices within each school, but will not require additional man-hours on the part of the faculty at either school. Results of the study and survey will be available through ACSC/DR o/a Jun 98.
3. RECOMMENDATION: AWC/CC and SOS/CC approve the administration of this survey by signing the SSS coordination block above.

FOR THE COMMANDANT

DAVID A. MILEWSKI, Lt Col, USAF
Director, Evaluation Division

Survey (AU Control #XXX)

1 Tab
Leadership Behaviors

AU SCN 97-47, Exp 31 Jan 98, Per HQ AU/XO

AF FORM 1760, SEP 04 (EF-V4)

(FORM FL02)
PREVIOUS EDITION WILL BE USED.

INSTRUCTIONS FOR THE SURVEY ADMINISTRATOR

Thank you for your time and efforts in administering this survey. Please brief the following instructions to the seminar or flight taking the survey:

1. The survey you are about to take has been approved by Air University (**Survey Control Number 97-47**) for administration at the officer PME schools. Your experience as an officer and the accuracy of the data you provide is critical to the success of this study. Therefore, your careful completion of the survey is greatly appreciated.
2. There is no time limit in taking the survey, but should take no more than **10 minutes** to complete.
3. Only **US military officers** should take the survey.
4. Fill out the **informed consent form**, separate it from the survey package, and return with the survey.
5. Note that the survey is double-sided. Ensure you answer the entire survey.
6. Please note that the responses are based on your experiences in **your last job** before becoming a student. If your assignment previous to Maxwell was also as a student, use your last non-student assignment as a basis for your responses.
7. When you complete the survey, return it to your unit drop-off point:
_____.

8.

INFORMED CONSENT

Purpose: This project is investigating how effective leadership skills may vary according to rank, career field, and branch of service. The leadership skills being investigated are those defined by Yukl's taxonomy (1990): informing, consulting and delegating, planning and organizing, problem solving, clarifying roles and objectives, monitoring operations and environment, motivating, recognizing and rewarding, supporting and mentoring, managing conflict and team building, and networking.

Status of Participants: The sample will consist of approximately 1,200 US military officers who are PME students at Air University. The company grade officers will be USAF students at Squadron Officer School (about 600). The field grade officers will be USAF, USN, USMC, and USA students (about 500) at Air Command and Staff College, and the USAF, USN, USMC, and USA students at Air War College (about 100).

Use of Data: All data will be kept confidential and are protected by the Privacy Act of 1974. All results will be reported as group summaries. No participant's name will appear in any reports, papers, or publications resulting from the study.

Risks to Participants: There are no risks associated with participation in this study. No known data or results will be submitted for inclusion in your personnel files.

Feedback to Participants: Copies of the final report will be available from ACSC/DER.

How to Participate: The entire survey requires about 5-10 minutes to complete. Your seminar leader or flight commander will provide instructions on distribution and collection of the surveys. Detach this sheet after completing, return to your flight commander/seminar leader.

Although this will take some of your valuable time, you will be helping to improve the leadership of those who will follow you. Therefore, your thoroughness and honesty are essential to obtaining valid results and is greatly appreciated.

Consent of Participant: Please read and initial each statement.

_____ I have read this page and agree to participate.

_____ I consent to the use of this information for the study.

_____ I understand that I can receive the results through the report of this study, obtainable through ACSC/DER.

Participant's Printed Name

Participant's Signature

Date

**AFTER SIGNING, DETACH THIS PAGE, GIVE IT TO YOUR SEMINAR LEADER OR
FLIGHT COMMANDER, AND CONTINUE THE SURVEY**

LEADERSHIP BEHAVIOR SURVEY

Part I. demographic information

- | | | | | | | | |
|--|---------------------|---------------------|---------------------|--------------|-------|--------|------|
| 1. Rank: | O-3 | O-4 | O-5 | O-6 | | | |
| 2. Total Years Selected BPZ (All Grades): | N/A | 1 | 2 | 3 | 4 | | |
| 3. Service: | Army | Navy | Air Force | Marines | | | |
| 4. Component: | AD | Reserve | Guard | | | | |
| 5. School: | SOS | ACSC | AWC | | | | |
| 6. Total Years of <i>Commissioned</i> Service: | < 4.0 | 4.0 to 7.0 | 7.1 to 11.0 | 11.1 to 15.0 | >15.0 | | |
| 7. AFSC/Career Field (Air Force Only) | | | | | | | |
| | 11XX (Pilot) | 32XX (CE) | 52XX (Chaplain) | | | | |
| | 12XX (Nav/EW) | 33XX (Comm/Comp) | 61XX (Sci/Research) | | | | |
| | 13XX (Comm/Control) | 34XX (Services) | 62XX (Dev Eng) | | | | |
| | 14XX (Intel) | 35XX (PA) | 63XX (Acquisition) | | | | |
| | 15XX (Weather) | 36/37XX (Personnel) | 64XX (Contract) | | | | |
| | 16XX (Ops Support) | 38XX (Manpower) | 65XX (Finance) | | | | |
| | 21XX (Logistics) | 4XXX (Medical) | 71XX (OSI) | | | | |
| | 31XX (SP) | 51XX (Law) | 84XX (Historian) | | | | |
| | | | 87XX (IG) | | | | |
| 8. Gender: | Male | Female | | | | | |
| 9. Number of People You Supervised (Directly and Indirectly) in <i>Most Recent Job</i>? | 0 | 1-5 | 6-10 | 11-20 | 21-50 | 51-100 | 101+ |

PART II. SIGNIFICANCE RATING

Effective leadership requires many different types of behavior. Eleven categories of behavior required for effective leadership are listed below. Please use the **scale at right to RATE the importance** of each leadership behavior category according to its overall importance or relevance for effective performance in your **most recent job before becoming a student** at Maxwell AFB.

1 = Not Relevant

2 = Slightly Important

3 = Moderately Important

4 = Very Important

5 = Absolutely Essential

_____ **Informing:** Disseminating relevant information about decisions, plans, and activities to people that need it to do their work; answering requests for technical information and telling people about the organizational unit to promote its reputation.

_____ **Consulting and Delegating:** Checking with people before making changes that affect them, encouraging suggestions for improvement, inviting participation in decision making, incorporating the ideas and suggestions of others in decisions, and allowing others to have substantial responsibility and discretion in carrying out work activities and making decisions.

_____ **Planning and Organizing:** Determining long-term objectives and strategies for adapting to environmental change, determining how to use personnel and allocate resources to accomplish objectives, determining how to improve the efficiency of operations, and determining how to achieve coordination with other parts of the organization.

_____ **Problem Solving:** Identifying work-related problems, analyzing problems in a timely but systematic manner to identify causes and find solutions, and acting decisively to implement solutions and resolve important problems or crises.

_____ **Clarifying Roles and Objectives:** Assigning tasks, providing direction in how to do the work, and communicating a clear understanding of job responsibilities, task objectives, deadlines, and performance expectations.

_____ **Monitoring Operations and Environment:** Gathering information about work activities, checking on the progress and quality of the work, evaluating the performance of individuals and the organizational unit, and scanning the environment to detect threats and opportunities.

_____ **Motivating:** Using influence techniques that appeal to emotion, values, or logic to generate enthusiasm for the work; commitment to task objectives; and compliance with requests for cooperation, assistance, support or resources; also setting an example of proper behavior.

_____ **Recognizing and Rewarding:** Providing praise, recognition, and rewards for effective performance, significant achievements, and special contributions.

_____ **Supporting and Mentoring:** Acting friendly and considerate, being patient and helpful, showing sympathy and support, and doing things to facilitate someone's skill development and career enhancement.

_____ **Managing Conflict and Team Building:** Encouraging and facilitating the constructive resolution of conflict, and encouraging cooperation, teamwork, and identification within the organizational unit.

_____ **Networking:** Socializing informally; developing contacts with people who are a source of information and support; maintaining contacts through periodic interaction, including telephone calls, correspondence, and attendance at meetings and social events.

All responses should be based upon your most recent job

Scale Provided by Dr. Gary Yukl

PART III. RANK ORDER

Based upon **your most recent job before becoming a student** at Maxwell AFB, rank order the **three MOST important/relevant** behaviors to being a successful leader in that job. Assign a “1” to the most important, a “2” to the second most important, and a “3” to the third most important.

- _____ **Informing**
- _____ **Consulting and Delegating**
- _____ **Planning and Organizing**
- _____ **Problem Solving**
- _____ **Clarifying Roles and Objectives**
- _____ **Monitoring Operations and Environment**
- _____ **Motivating**
- _____ **Recognizing and Rewarding**
- _____ **Supporting and Mentoring**
- _____ **Managing Conflict and Team Building**
- _____ **Networking**

Based upon **your most recent job before becoming a student** at Maxwell AFB, rank order the **three LEAST important/relevant** behaviors to being a successful leader in that job. Assign a “1” to the least important, a “2” to the second least important, and a “3” to the third least important.

- _____ **Informing**
- _____ **Consulting and Delegating**
- _____ **Planning and Organizing**
- _____ **Problem Solving**
- _____ **Clarifying Roles and Objectives**
- _____ **Monitoring Operations and Environment**
- _____ **Motivating**
- _____ **Recognizing and Rewarding**
- _____ **Supporting and Mentoring**
- _____ **Managing Conflict and Team Building**
- _____ **Networking**

Based upon **your most recent job before becoming a student** at Maxwell AFB, check (X) the one behavior in which you feel you need the most improvement.

- _____ **Informing**
- _____ **Consulting and Delegating**
- _____ **Planning and Organizing**
- _____ **Problem Solving**
- _____ **Clarifying Roles and Objectives**
- _____ **Monitoring Operations and Environment**
- _____ **Motivating**
- _____ **Recognizing and Rewarding**
- _____ **Supporting and Mentoring**
- _____ **Managing Conflict and Team Building**
- _____ **Networking**

All responses should be based upon <i>your most recent job</i>

Please return your completed survey to your seminar leader or flight commander.

Thank you for your time and cooperation!

Bibliography

- Air Force Personnel Center. *Personnel Statistics: Officer Demographics*, 1997, on-line, Internet, 19 December 1997, available from <http://www.afpc.af.mil>.
- Benson, P.G., "The Hawthorne Effect," in *Encyclopedia of Psychology*, Vol. 2, ed. Raymond J. Corsini (New York: Wiley and Sons, 1994).
- DA Pamphlet 600-80. *Executive Leadership*, 1986.
- FM 22-103. *Strategic Leadership*, Draft, Undated.
- Harris, P., and K.W. Lucas. *Executive Leadership: Requisite Skills and Developmental Processes for Three- and Four-Star Assignments*. Research report. Alexandria, VA: Army Research Institute, 1994.
- Hobson, Charles J. and F.W. Gibson. "Policy Capturing as an Approach to Understanding and Improving Performance Appraisal: A Review of the Literature," *Academy of Management Review* 8, no. 4 (1983): 640-649.
- Hughes, Richard L.; Robert C. Ginnett; and Gordon J. Curphy. *Leadership: Enhancing the Lessons of Experience*. Illinois: Irwin, 1993.
- Hurry, Linda S. "Measuring Behaviors of Air Force Officers as Indicators of Effective Performance and Leadership." Master's thesis, Air Force Institute of Technology, 1995.
- Jacobs, T. Owen. "A Guide to the Strategic Leader Development Inventory." In *Leadership and Ethics*. Edited by Gail Arnott et al. (Maxwell AFB, AL: Air University Press, 1997), 79-105.
- Jacobs, T.O., and E. Jaques. "Leadership in Complex Systems." In *Human Productivity Enhancement: Organizations and Personnel*, vol. 2. Edited by J.A. Zeidner. New York: Praeger, 1987.
- Jacobs, T.O., and E. Jaques. "Military Executive Leadership." In *Measures of Leadership*. Edited by K.E. Clark and M.B. Clark. West Orange, NJ: Leadership Library of America, 1990.
- Jaques, Elliot. *A General Theory of Bureaucracy*. New York: Halsted Press, 1976.
- Jaques, Elliott. *Requisite Organization*. USA: Cason Hall, 1989.
- Jaques, E., S. Clement, C. Rigby, and T.O. Jacobs. "Senior Leadership Performance Requirements at the Executive Level." Research report. Alexandria VA: Army Research Institute, 1985.
- Jennings, Gilbert W. "Leadership Self-Efficacy: Measuring the Effects of Leadership Training at Squadron Officer School." Master's thesis, Air Force Institute of Technology, 1991.
- Junior, Berlain Hatfield. "Strategic Leadership Development: An Operation Domain Application." Research paper, Air Command and Staff College, March 1997.
- Katz, R.L. "Skills of an Effective Administrator," *Harvard Business Review*, Jan-Feb 1955: 33-42.

- Katz, D., and R.L. Kahn. *The Social Psychology of Organizations*. New York: John Wiley and Sons, 1966.
- Kavanagh, Michael J., W. Borman, J. Hedge, and R. Gould. "Job Performance Measurement in the Military: A Classification Scheme, Literature Review, and Directions for Research." AFHRL-TR-87-15. Brooks AFB, TX: September 1987.
- Mann, F.C. "Toward an Understanding of the Leadership Role in Formal Organization." In *Leadership and Productivity*. Edited by R. Dubin et al. San Francisco: Chandler, 1965.
- Mintzberg, Henry. *The Structuring of Organizations*. Englewood, NJ: Prentice Hall, 1979.
- Mintzberg, Henry. *Mintzberg on Management*. New York: The Free Press, 1989.
- Morabito, Michael A. "Analysis of Air Force Junior Aircraft Maintenance Officer Leadership Development." Master's thesis, Air Force Institute of Technology, 1985.
- Purvis, Joseph H. Jr. "Strategic Level Leadership: Are There Two Levels of Leadership in The Army or Three?" Research paper, School of Advanced Military Studies, May 1989.
- Simon, H.A. *The New Science of Management Decision*. Englewood Cliffs, NJ: Prentice Hall, 1977.
- Taylor, Ralph S. "Redefining Leadership Skills For Instructor Pilots—A Hierarchical Analysis of Flightline Job Roles and Responsibilities." Research project, Embry-Riddle Aeronautical University, 1997.
- Timmons, T.T. *Commanding and Air Force Squadron*. Maxwell AFB, AL: Air University Press, 1993.
- Van Fleet, D. and G.A. Yukl. *Military Leadership: An Organizational Behavior Perspective*. Greenwich, CT: JAI Press, 1986.
- Van Scotter, James R. "Evidence for the Usefulness of Task Performance, Job Dedication, and Interpersonal Facilitation as Components of Performance." Ph.D. diss., University of Florida, 1994.
- Yukl, Gary A. *Leadership in Organizations*. Englewood Cliffs, NJ: Prentice Hall, 1994.
- Yukl, G., S. Wall, and R. Lepsinger, R. "Preliminary Report on Validation of the Managerial Practices Survey." In *Measures of Leadership*. Edited by K.E. Clark and M.B. Clark. West Orange, NJ: Leadership Library of America, 1990.

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